

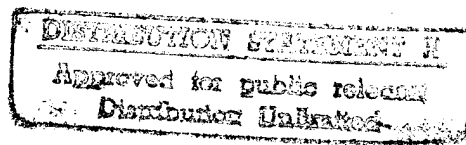
NAVAL WAR COLLEGE
Newport, R. I.

**OPERATIONAL ENCIRCLEMENT IN FUTURE LIMITED CONVENTIONAL WARS:
OVERWHELMING SUCCESS AND DOCTRINAL ILLUSION.**

by

Daniel J. Peters

Major, U. S. Marine Corps



A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Joint Maritime Operations Department.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

14 June 1996

Paper directed by
Lieutenant Colonel Richard J. Martin, U. S. Marine Corps
Faculty Member, Joint Maritime Operations Department
Robert K. Reilly
Professor, Joint Maritime Operations Department

19960501 213

DTIC QUALITY INSPECTED 1

REPORT DOCUMENTATION PAGE

1. Report Security Classification: UNCLASSIFIED			
2. Security Classification Authority:			
3. Declassification/Downgrading Schedule:			
4. Distribution/Availability of Report: DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.			
5. Name of Performing Organization: JOINT MILITARY OPERATIONS DEPARTMENT			
6. Office Symbol: C		7. Address: NAVAL WAR COLLEGE 686 CUSHING ROAD NEWPORT, RI 02841-1207	
8. Title (Include Security Classification): Operational Encirclement in Future Limited Conventional Wars: Overwhelming Success and Doctrinal Illusion. (UNCLASSIFIED)			
9. Personal Authors: Major Daniel J. Peters, USMC			
10. Type of Report: FINAL		11. Date of Report: 09 Feb 1996	
12. Page Count: 31			
13. Supplementary Notation: A paper submitted to the Faculty of the NWC in partial satisfaction of the requirements of the JMO Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.			
14. Ten key words that relate to your paper: Operational Encirclement, Joint Force Commander, Operations Maneuver Group, Prisoners of War, Weapons of Mass Destruction, Intelligence, Communications, Logistics, Breakout Operations			
<p>15. Abstract: This monograph examines and analyzes operational encirclement from the perspective of current doctrine and the future Joint Force Commander (JFC). This analysis explores some elements of operational art in relation to future warfighting. Military theorists are divided on the risks and benefits of operational encirclement. The high rewards of operational encirclement are inviting to JFC's, and are validated through historical example. There are some stunning case studies of failure due to a variety of reasons. Generally, these failures can be attributed to oversight of several facets of operational art.</p> <p>This paper concludes that there are many considerations the JFC must take into account in the planning and execution of operational encirclement. This monograph recommends that US operational doctrine be updated to include operational encirclement as an operational maneuver in its own right, distinguish three different types of encirclements, and revise breakout operations. Tactical doctrine should be modified to reflect the revised operational methods.</p>			
16. Distribution / Availability of Abstract:	Unclassified X	Same As Rpt	DTIC Users
17. Abstract Security Classification: UNCLASSIFIED			
18. Name of Responsible Individual: CHAIRMAN, JOINT MILITARY OPERATIONS DEPARTMENT			
19. Telephone: 841- 647 6461		20. Office Symbol: C	

TABLE OF CONTENTS

<u>ITEM</u>	<u>PAGE NUMBER</u>
Table of Contents	i
Abstract	ii
<u>Paper</u>	
Theoretical Framework	1
Battle of Cannae - The Model Established	3
Modern Aspects of Operational Encirclement	4
Air and Maritime Power	6
Breakout Operations	7
Operational Support	8
Disadvantages	10
Potential Problems	11
Conclusion	14
Recommendations	15
Endnotes	16
<u>Figures</u>	
1 - Partial Chronological List of Operational Encirclement Battles - Successes and Failures	17
2 - Single Envelopment	19
3 - Double Envelopment	20
4 - Encirclement with Inner and Outer Arms	21
5 - Operation Barbarossa - 1941	22
Acronyms	23
Bibliography	24

ABSTRACT

OPERATIONAL ENCIRCLEMENT IN FUTURE LIMITED CONVENTIONAL WARS: OVERWHELMING SUCCESS AND DOCTRINAL ILLUSION.

by MAJOR DANIEL J. PETERS, USMC

This monograph examines and analyzes operational encirclement from the perspective of current doctrine and the future Joint Force Commander (JFC). This analysis explores some elements of operational art in relation to future warfighting.

Military theorists are divided on the risks and benefits of operational encirclement. The high rewards of operational encirclement are very inviting to JFC's, and are validated through historical example. There are some stunning case studies of failure due to a variety of reasons. Generally, these failures can be attributed to the oversight of several facets of operational art.

This paper concludes that there are many considerations the JFC must take into account in the planning and execution of operational encirclement, and breakout operations. This monograph recommends that US operational doctrine be updated to include encirclement as an operational maneuver in its own right, distinguish three differing types of encirclements, and revise breakout operations. Tactical doctrine should be modified to reflect the revised operational methods.

THEORETICAL FRAMEWORK

The historic records of operational encirclements portend the high military potential for their application in future campaigns. See Figure 1. The overwhelming significance of successful operational encirclement provides ambrosia to the operational commander. The record is plain that the effect of operational encirclement is a "coup de main" maneuver. The historic perspective is that a well thought out, long-term strategic framework is a prerequisite to reap the rewards of operational maneuver warfare. ¹ For example, General Allenby's 1918 Palestine campaign encircled the Turkish 8th Army at Megiddo, thereby unhinging the entire German and Turkish defenses. General Allenby destroyed two additional Turkish Armies because the Turks could not fall back in an orderly fashion.

The most significant effects of operational encirclement are the physical and psychological dislocation of the enemy. This dislocation derives its strength from the ability to simultaneously control the enemy's lines of operation, communication, and retreat. Flanking or turning movements normally unbalance an army. This unbalancing occurs as a result of an enemy turning itself in a new direction, which provides a period of instability for the army. Encirclement promises more than unbalancing the enemy because of the heightened emotional aspects of being ensnared. Operational decisions are affected by the enemy's logistics being severed and the panic dimension of entrapment. The psychological pressure of no quick escape and reduced resources wears on an undisciplined army, therefore magnifying the results. In summation, encirclement is a cataclysmic event for an operational force, tearing apart and shocking the victim to a point where encircled forces no longer have the means to fight nor the ability to respond cohesively.

Operational encirclements can be conducted in three general maneuvers. First, the single envelopment. This can be conducted in a variety of means. The enemy can be pressed against an impassable terrain feature like a body of water (i.e., Dunkirk) or a sovereign border (i.e., Desert Storm plan). The single envelopment can also close upon itself (i.e., Yom Kippur War). Second, the double envelopment can establish two pincers that close upon each other (i.e., Cannae). Last, the inner and outer arm encirclement, with the inner wall containing the encircled forces and the outer perimeter protecting the encirclement operation (i.e., Stalingrad). See Figures 2 through 4. Finally, operational encirclement can be either employed offensively (i.e., the Battle of Tannenberg, east of the Vistula River in 1914) or defensively (i.e., Cannae). Current U.S. doctrine on encirclements considers the maneuver as only a variation of envelopment, and does not address the decisive nature of this maneuver. Furthermore, U.S. literature delves more into how to breakout of an encirclement than how to conduct an encirclement.

The world continues to evolve rapidly, particularly in the technological and information fields. Consequently, the world has become more complex for the military during the past 50 years. The future warfare in which the Joint Force Commander (JFC) must navigate, particularly limited conventional conflict in a regional setting with political restraints, may require the employment of operational encirclement. The implications of restructured militaries, technology, cultural bias, the lethality of the modern battlefield, and the level of violence are additional considerations. The focus of this paper is to discern doctrinal requirements and the considerations the future JFC should contemplate and plan for before using the technique of operational encirclement.

Operational encirclement is a strong candidate for "campaign winner." This maneuver technique is suitable to the American operational culture of "quick, decisive victory." Operational encirclement properly employed within the strategic framework and unity of effort of the friendly alliance could be used to decapitate members of the opposing adversarial coalition. Additionally, operational encirclement could be employed to eliminate a common threat to the entire coalition or eliminate the weakest link in the opposing bloc. The employment of operational encirclement accrues various advantages to the attacker, mostly related to the element of time. Economic losses are minimized, reconstitution efforts are mitigated, fewer things can go wrong (Murphy's Law), public support and attention are easier to maintain, and an opportunity is provided to preempt escalation by the enemy.²

THE BATTLE OF CANNAE--THE MODEL ESTABLISHED

The historic origins of operational encirclement began with the Battle of Cannae in 216 B.C. Hannibal's coalition forces slaughtered the Romans in a masterful set piece battle featuring a double envelopment turned into an encirclement. See Figure 3. The Carthaginian cavalry hit the Roman rearguard units. This maneuver panicked the majority of Romans with unit cohesion quickly evaporating. Approximately 60,000 Roman soldiers were systematically butchered in the ensuing hour. Only one Roman contingent successfully fought its way out of Hannibal's trap.

The Battles of Cannae and Sedan (1870) were deified by General von Schlieffen in his "*Cannae Studien*," that is, inferior numbers could destroy a larger foe. General von Schlieffen's conclusion was that maneuvering against the flanks and rear of the enemy to sever his communications had always been decisive in war, whereas everything else merely leads to

“ordinary” victories. General von Schlieffen’s ideas permeated the intellectual orientation of two generations of the German Army’s officer corps. We need to master and apply General von Schlieffen’s ideas based on the Cannae paradigm, rather than focus on the failed outcome of his plan during the First World War--the time sensitive, set piece campaign.³ Additionally, there are some recent factors and variations that affect operational encirclement. Some key factors that have changed over time are the application of technology, particularly space based platforms, weapons of mass destruction (WMD), and the advent of modern air and naval power.

MODERN ASPECTS OF OPERATIONAL ENCIRCLEMENT

The lethality of modern weapons, both conventional and WMD, will disperse forces within the future battlespace and accrue advantages to the defense. The prospects of success in the direct attack of strong points have diminished enormously. The assailant is compelled to attack the enemy’s flanks and exercise pressure on his communications. Smaller, specialized militaries can no longer afford to waste well-trained forces through attrition warfare. The modern battlefield will be increasingly non-linear. Therefore, the future battlefield presents the perfect opportunity and venue for maneuver warfare. Operational encirclement is a key instrument in the maneuver warfare “tool box;” however, the primary risk associated with encirclements is that the offensive and defensive forces must mass and are therefore vulnerable to WMD.

Large modern encirclements may take several days to execute. The Soviet concept of echelonment is used to support maneuver over extended periods of time. Echelonment provides for a continuous attack to maintain operational speed and maneuver. Soviet echelonment comprises three tiers: (1) first echelon commands create attacks and opportunities; (2) second

echelon reinforces the first echelon and creates the external front on an encirclement and (3) the Operational Maneuver Group (OMG) completes the encirclement by attacking the rear.⁴ This technique is an excellent counter to NATO's "forward defense" concept.

Operational encirclement can be used against joint and multinational forces, especially during the initial power projection and war termination phases. The divergence of coalition interests near a campaign's culmination point may produce gaps within the coalition's center of gravity that can be exploited by a cohesive adversary. The thinking is that operational encirclement can prevent the introduction of U.S. forces, overpower the opponent, or reverse the course of the campaign. Two paradoxes of this line of reasoning are that operational encirclement can decelerate the tempo of maneuver warfare and our adversaries may wait for U.S. forces to be introduced to conduct encirclement operations to embarrass this nation. The Soviets envisioned invading Western and Central Europe using operational encirclement within the first seven days of the campaign, with less emphasis on flanking movements and frontal assaults.⁵ The Soviets were seeking to employ our aggressiveness against us by drawing us into encirclement traps and sealing the back door with the OMG. The Soviet plan might have worked to NATO's advantage. The Soviet's encirclement would slow the tempo of offensive operations, and afford the U.S. the opportunity to continue and complete the strategic reinforcement of Europe.

The Gulf War offers an excellent example concerning the war termination phase aspect. General Schwarzkopf's "Hail May" maneuver to encircle and crush the Republican Guards would have resonated through Iraq and the Persian Gulf region if allowed to culminate decisively. The destruction of the Republican Guards would have disrupted Saddam Hussein's

political base, shifted the balance of power within the region, and possibly allowed the Shia Muslims and Kurds to garner favorable concessions without battle. The military repercussion of U.S. failure to encircle the Republican Guards is that we are still engaged in military operations in the region--United Nation's sanction enforcement, Operations PROVIDE COMFORT and SOUTHERN WATCH. The political consequence is a destabilized region.

AIR AND MARITIME POWER

Successful encirclements can also be attributed to the employment of air power. When air power is employed effectively in conjunction with operational encirclement, it can seal the pockets created by ground forces, create psychological demoralization, destroy or neutralize enemy capabilities, and prevent counter attacks and breakouts. For example, during the Battle of Kiev German air power protected exposed flanks, maintained the encirclement, prevented resupply and reinforcement. The campaign of the German Army Group Center at Smolensk had large gaps between main force units--primarily due to the large region, terrain, and heavily wooded areas. The Luftwaffe was able to prevent the majority of Russian forces from withdrawing from the Smolensk pocket. German ground forces captured over 310,000 Soviet Prisoners of War. It is estimated that another 100,000 Russians did escape through heavily forested area around Smolensk; however, all of their military equipment and material were abandoned and the Soviet units could not be effectively regenerated.⁶ See Figure 5 for additional data on Germany's 1941 encirclements on the Eastern Front.

There are two significant examples of failure to apply air. Hitler instigated an operational pause as a strategic initiative to induce the British to sue for peace in 1940. Hitler's

three-day "Stop" order prevented the full employment of the Luftwaffe and allowed the Allies to safely evacuate over 338,000 troops from the port of Dunkirk.

More spectacularly--the German Navy evacuated over 500,000 soldiers (to include 4 intact Divisions and 157,000 wounded) and 1,500,000 refugees from the Kurland Peninsula in 1945 to escape Soviet encirclement. The Germans repeated this success story successively at Pillau, Konigsberg, Gdynia, and Danzig.⁷ In these cases, the Soviets lost the opportunity for a momentous psychological and military victory, and allowed the Germans to reconstitute their forces. These cases clearly point out that the Germans exerted local sea control and influenced the air cover over the withdrawal. The Soviets failed to conduct naval or maritime interdiction operations to prevent the Germans from escaping from the Kurland Peninsula. Air and sea power can provide a significant enhancement in land maneuver warfare capabilities, and are key elements for future operational encirclement.

BREAKOUT OPERATIONS

Current U.S. doctrine concerning breakout operations is more robust than encirclement. Unfortunately, the doctrine is at the tactical vice operational levels. A contrast of U.S., Soviet, and German doctrine reveals two major flaws in American breakout principles: (1) we delegate the breakout operation to the encircled commander, and (2) we do not specify aerial resupply as the only viable means of replenishment to encircled forces.

Generally, the encircled force should collapse its perimeter to facilitate the defense to offense transition, and begin detailed planning and coordination with the senior commander outside the encirclement. This must be done since premature breakouts are generally self-destructive. To sustain this planning effort, air delivery will be the primary means of resupply

for encircled forces. The senior commander will develop his combined arms battle plan, focusing on lines of operations of the breakout and relief forces, the link up point, and integrated operational fires. Air assault and artillery fires will be highly synchronized with both forces (encircled and relief) to shape the battlefield for the breakout operation.⁸ The JFC must be aware of this doctrinal gap and act accordingly when U.S. forces are encircled. Additionally, the JFC can survey the battlefield when we encircle enemy forces. This allows the JFC to anticipate the military activities that former Russian and German trained forces will undertake to escape an encirclement, and take appropriate countermeasures.

Hitler's fixation to hold Stalingrad at all costs forfeited the German 6th Army. He publicly staked his prestige on the battle's outcome. The Soviets were able to effect an encirclement with inner and outer arms. The German 6th Army had several opportunities to effect a breakout operation, most of which could have been successful due to Soviet ineffectiveness in the initial encirclement. The key point from Stalingrad is that breakout operations must be conducted vigorously, within three days of being encircled, and take advantage of initial gaps and weaknesses in the encircling force.

OPERATIONAL SUPPORT

Synchronized, systematic, and persistent operational fires are essential to support maneuver. Operational fires reduce the amount of hard combat to accomplish objectives and facilitate gaining an advantage bearing on the entire campaign. General Allenby's scheduled operational fires combined with an elaborate deception plan generated complete surprise in encircling the Turkish 8th Army. On the other hand, the Soviets mitigated their risks of employing marginally trained troops and central execution in encirclement operations through

mass and overwhelming artillery support. For example, the Soviets massed 400 artillery pieces per mile of a 350 mile frontage during the battles of Vitebsk, Bobruisk, and Minsk. The Germans lost 25 of 33 divisions through these three encirclements.⁹

Operational logistics is another factor that must be taken into account with coalition forces maneuvering during encirclement operations. Maneuvering elements as the focus of main effort require dedicated logistical support. Economy of force operations will receive sufficient resources to meet their minimal requirements. The problem is that maneuvering forces may move fluidly over differing lines of operation (to maintain pressure and unhinge the enemy), consequently service and national logistical umbilical cords may become twisted and eventually strangle the operation. If operational encirclement is contemplated, it is imperative that joint or multinational logistics commands be established.¹⁰ The joint or multinational logistics command will reduce the number of logistics personnel in the field, and streamline support to the maneuvering forces. Additionally, logistics flexibility and central direction of the logistical support operation will lend responsiveness and economy to the effort. If the logistical structure is not well thought out, operational excellence can be curtailed. For example, Rommel was able to escape two potential encirclements in North Africa due to Montgomery's logistical problems.¹¹

It is interesting to note how climate affects these support functions and maneuver. However, encirclement has been conducted during all seasons. The JFC must consider the interaction of operational functions, and the potential disruption or assistance weather can play. For example, the Russians attacked in the winter months in Eastern Europe because their lines of operation were markedly improved (i.e., no mud and frozen rivers).

DISADVANTAGES

Nonetheless, there can be drawbacks to the employment operational encirclement. Third party intervention may be induced by a dramatic operational encirclement. For example, during the Yom Kippur War the Israelis trapped the Egyptian Third Army in Sinai and destroyed the Egyptian Surface to Air Missile (SAM) sites west of the Suez Canal. See Figure 2. The Israeli Air Force exploited the SAM gap leaving the military poised to pulverize the Egyptian Third Army. The Soviets alerted seven divisions for possible deployment into Egypt and the U.S. forces were placed on "Precautionary Alert." ¹²

The failure to properly plan and execute an operational encirclement can have strategic implications. For example, the Western Allies lost an opportunity to trap the German 5th and 7th Armies at Falaise, France in 1944. The timing of the encirclement in conjunction with the failed assassination attempt on Hitler and the liberation of Paris a week later would have resonated politically and militarily in Berlin. The lack of Allied planning, poor command and control, and the inability to read the battlefield allowed Hitler a respite from disaster. The Axis Powers could not hide such a "triple play" and continue to effectively wage war. ¹³ The Allies did adapt from the failure at Falaise Gap, and went on to successfully encircle the Ruhr the following year. However, surrounding the Ruhr had less strategic impact than if Montgomery had closed the Falaise Gap conclusively.

POTENTIAL PROBLEMS

The level of violence in the world is exacerbated by economic, ecological, religious, and ethnic pressures. The world is being fractured into smaller states from stresses placed on the local populace. Anarchy and national dismemberment make national sovereignty in parts of the world fictitious. Additionally, where different religions converge geographically, conflict arises like great tectonic plates grinding on one another. For example, the current conflict in the Balkans has its roots in religious and ethnic differences. The level and form of this type of violence unleashes the emotive power of religious and ethnic passions, producing motivated warriors and potential political restraints. The convergence of these factors in a geographic region, with the increased number of nation states with specific ethnic or religious agendas, will ensure the world will be embroiled in conflict for some time to come. For example, since World War II, there has been at least one war on going on this planet except for one three-week interval in the past 50 years! ¹⁴

The JFC must consider the religions and ethnicity of our allies and enemies, and consider the implications on America's relations with our coalition partners. The use of operational encirclement and its attendant overwhelming success on the battlefield may garner additional adversaries, neutralize coalition partners within our coalition, or produce internal defections from members who have a common ethnic or religious background. This factor may be a brake on the use of operational encirclement. Additionally, a coalition partner could disrupt the JFC's encirclement through a breach of coalition rules of engagement, violation of international law, or disregard for the media's influence.

The JFC must be aware of cultural, doctrinal, and political biases that may indicate that only Western or democratic nations can conduct operational encirclements. Several encirclement battles in Asia during the 1940's highlight this point. The capability to conduct operational encirclement is a rapidly acquired and perishable skill as evinced on the Eastern Front during World War II. See Figure 1. Therefore, any potential adversary with the will, inclination, and training can employ this maneuver. Intelligence, indications and warnings, discipline, active defense in depth (not reserves), air superiority, and operational excellence are measures to prevent being surprised.

The Gulf War may have left the impression that there may have to be an over-reliance on modern Western forces to conduct the operational encirclement and have Third World forces provide economy of force measures to support the maneuver. This perception can be overcome in future conflict with some prescriptive measures and multinational training exercises. The friendly coalition must be proficient in tactical and operational matters, interoperable at all levels (i.e., communications, intelligence, doctrine, etc.), and assigned to appropriate sectors or functions during encirclement operations.¹⁵ The U.S. should not be adverse to using various coalition partners if they meet this foregoing litmus test. If certain allies lack sufficient interoperability and are assigned economy of force missions, the JFC must assess the vulnerability of multinational forces to enemy counterattack or counter-encirclement to unhinge our encirclement operations.

We should keep in mind that different cultures may not follow U.S. initiatives and direction. These nations will likely develop capabilities asymmetrical to ours. This creates opportunities for them to take advantage of U.S. weaknesses, one of which is the premium we

place on the preservation of life. Care must be exercised not to assume these matters away during the planning phase, otherwise they will quickly become exploitable vulnerabilities.

To amplify this point, the enemy could encircle a command as bait for their trap--the real objective being the relief forces. Another doctrinal shift is the Poles' intention to have encircled units devolve into partisan warfare, especially in the Pripet Marshes. This was a clear split from Soviet practice, and is indicative of Poland's efforts to recreate a Polish military science appropriate to Polish geography, military history, tradition, and force structure.¹⁶ Clearly there are doctrinally shifts, and the challenge is to anticipate the next iteration of thinking. For example, a future adversary may opt to use urban areas to protect encircled troops with a civilian screen, presenting the U.S. with a host of potential problems across the levels of warfare. Current U.S. doctrine on military operations in urbanized terrain focuses on municipal topography and regular military forces, does not consider encirclement as a maneuver option, relegates civil matters to combat service support, and is silent on the unconventional warfare aspects of urban warfare.

To conduct future operational encirclements, the JFC must consider that the United States may not dominate in certain technologies or their use. The access to information technology and associated products, to include space based platforms, are commercially and readily available to all players on the modern battlefield.¹⁷ The U.S. must be able to counter, obscure, or reduce an adversary's ability to exploit the intelligence and communications capabilities, especially satellites. Blinding the enemy is essential if American forces and our coalition partners are to achieve surprise and support our deception operations. Additionally,

our potential adversaries have dissected our success during the Gulf War and taken remedial actions in preparation for prospective conflicts.

CONCLUSION

The relevance of operational encirclement remains applicable to the Joint Force Commander (JFC) of the future. Operational encirclement remains a potent operational maneuver due to the unbalancing of large enemy forces. The enemy's cohesiveness can be significantly degraded by their physical and psychological dislocation. Operational encirclement is a very appropriate maneuver considering the American military culture of quick, decisive victory.

However, the various factors that must be weighed require a fine tuned situational awareness and the acknowledgment of risks associated with this form of operational maneuver. Classic military theorists are divided on the risks and benefits of operational encirclement. These risks must be balanced against force capabilities, strategy, and political sensitivities. In general, if the JFC consciously mitigates the operational risks, significant benefits will normally accrue to encircling force and enhance the commander's freedom of action in follow on operations.

The JFC should adhere to Moltke the Elder's precepts: *"Experience of former wars must not be neglected, but is no safe guide for our days. The political and strategic situation has changed. To arrive at the result intended, the only way left to us is to trace the martial events of the future, and get thoroughly acquainted with the present conditions. We cannot arrive at a result correct in all essentials, but we can ascertain the only basis on which we can found our measures."*¹⁸

RECOMMENDATIONS

The major improvement that can assist future JFC's and service components is to enumerate the various facets and potentialities of operational encirclement in U.S. doctrine. The categorization of operational encirclement as a "*variation of envelopment*" does a major disservice to its overwhelming capability. Accordingly, the following recommendations address some of the major doctrinal issues to rectify these problems.

- * Add operational encirclement as a specific category of maneuver to doctrinal publications, and amplify the advantages (i.e., dislocation) and disadvantages (i.e., slow the operational tempo) of this operational technique.

- * Illustrate the three different types of operational encirclement (single envelopment (with three variations), double envelopment, and encirclement with inner and outer arms).

- * Consider the impact of operational encirclement in military operations in urbanized terrain.

- * Revise breakout operation doctrine to reflect the breakout commander as the senior commander outside the encirclement, and that resupply be conducted by air delivery.

- * Rewrite tactical doctrine to reflect and mirror the changes in operational encirclement doctrine.

NOTES

- ¹ Bernhardt, Frederick von. Cavalry in Future Wars. London, Eng: John Murray, 1909, p. 37.
- ² Nauta, Frans. Logistics Implications of Maneuver Warfare. Vol. 3. Bethesda, MD: Logistics Management Institute, 1988, pp. 23-25.
- ³ Willoughby, Charles A. Maneuver in War. NAVMC 2796. Washington: Headquarters, U. S. Marine Corps, 1986, p. 103-104. Van Creveld, Martin. Air Power and Maneuver Warfare. Maxwell AFB, AL: Air University Press, 1994, pp. 23. Bernhardt, Frederick von. On War of Today. Volume I. London, Eng: Hugh Rees, 1912, pp. 16-17.
- ⁴ Nauta, Vol. 3, pp. 27-29, 36-37.
- ⁵ Nauta, , Frans. Logistics Implications of Maneuver Warfare. Vol. 5. Bethesda, MD: Logistics Management Institute, 1989, p. 16.
- ⁶ Van Creveld, pp. 37, 85, 95, 131, 210-211. For additional material on regeneration difficulties, refer to: (1) Grau, Lester W. Fighting within an Encirclement: A Comparison of National Concepts. Fort Leavenworth, KS: Soviet Army Studies Office, USA Combined Arms Command, 1991, p.16; or (2) U. S. Army. Division Operations. FM 71-100. Washington, 1990, pp. 6-8 to 6-9.
- ⁷ Dupuy, R. Ernest and Trevor N. Dupuy. The Harper Encyclopedia of Military History. 4th Edition. New York: Harper Collins Publishers, 1993, p. 1228.
- ⁸ Grau, pp. 6, 9, 13, and 25.
- ⁹ Dupuy, p. 1220.
- ¹⁰ Van Creveld, p. 17.
- ¹¹ Dupuy, p. 1188.
- ¹² Van Creveld, pp. 178-181. Dupuy, pp. 1350-1351.
- ¹³ Fix, Robert G. Operational Encirclement: Quick Decisive Victory or a Bridge Too Far? Fort Leavenworth, KS: USA Command and General Staff College, 1993, pp. 12-13, 20.
- ¹⁴ Kaplan, Robert D. The Coming Anarchy. The Atlantic Monthly, Feb 1994, p. 52. Huntington, Samuel P. The Clash of Civilizations? Foreign Affairs, Summer 1993, p. 31. Toffler, Alvin and Heidi Toffler. War and Anti-War. New York: Warner Books, 1993, pp. p. 13.
- ¹⁵ Pudas, Terry J. Preparing Future Coalition Commanders. Joint Force Quarterly, Winter 1993-4, p. 45.
- ¹⁶ Grau, pp. 9,12-14,19,25.
- ¹⁷ Horner, Charles A. Space Systems Pivotal to Modern Warfare. Defense 94, Issue 4, p. 22.
- ¹⁸ Bernhardt. On War of Today. Volume I, p. 17-18.

Figure #1

**PARTIAL CHRONOLOGICAL LIST OF OPERATIONAL ENCIRCLEMENT
BATTLES - SUCCESSES AND FAILURES**

<u>YEAR</u>	<u>BATTLE NAME (MANEUVER/ENCIRCLED COUNTRY)</u>
216 BC	Cannae (Carthage/Rome)
1241	Sajo River (Mongolia/Hungary)
1870	Sedan (Prussia/France)
1914	Tannenberg (Germany/Russia)
1918	Megiddo (Britain/Turkey)
1938	Taierchwang (China/Japan)
1940	Dunkirk (Germany/Western Allies)
1941	Beda Fomm (Britain/Italy)
1941	Germany/USSR Minsk-Bialystok Smolensk Uman Gomel Kiev Pocket North of the Sea of Azov Vyazma-Bryansk
1942	Yenangyaung (Japan/Britain)
1943	Stalingrad (USSR/Germany)

Figure #1

**PARTIAL CHRONOLOGICAL LIST OF OPERATIONAL ENCIRCLEMENT
BATTLES - SUCCESSES AND FAILURES**

1944	USSR/Germany Korsun Tarnapol Vitebsk, Bobruisk and Minsk Falaise Gap (Western Allies/Germany) Montelina (Western Allies/Germany) Battle of the Bulge (Germany/US)
1945	Colmar Pocket (France/Germany) German Navy successfully evacuated Baltic areas Kurland Peninsula Pillau Konigsberg Gdynia Danzig Ruhr Pocket (Western Allies/Germany)
1948	Mukden (Chinese Communists/Nationalists)
1949	Hwai Hai (Chinese Communists/Nationalists)
1973	Yom Kippur War (Israel/Egypt)
1992	Desert Storm (US and coalition partners/Iraq)

FIGURE #2

SINGLE ENVELOPMENT

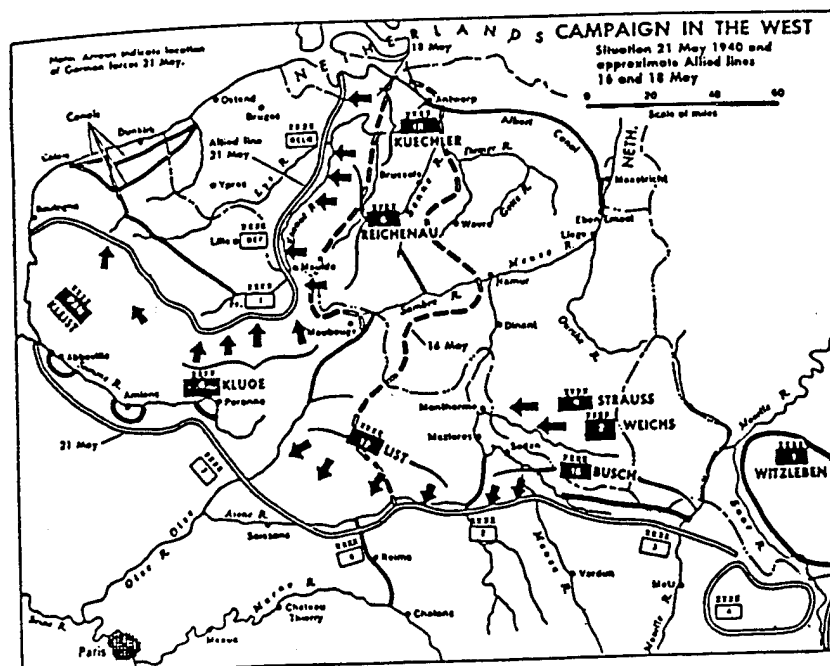
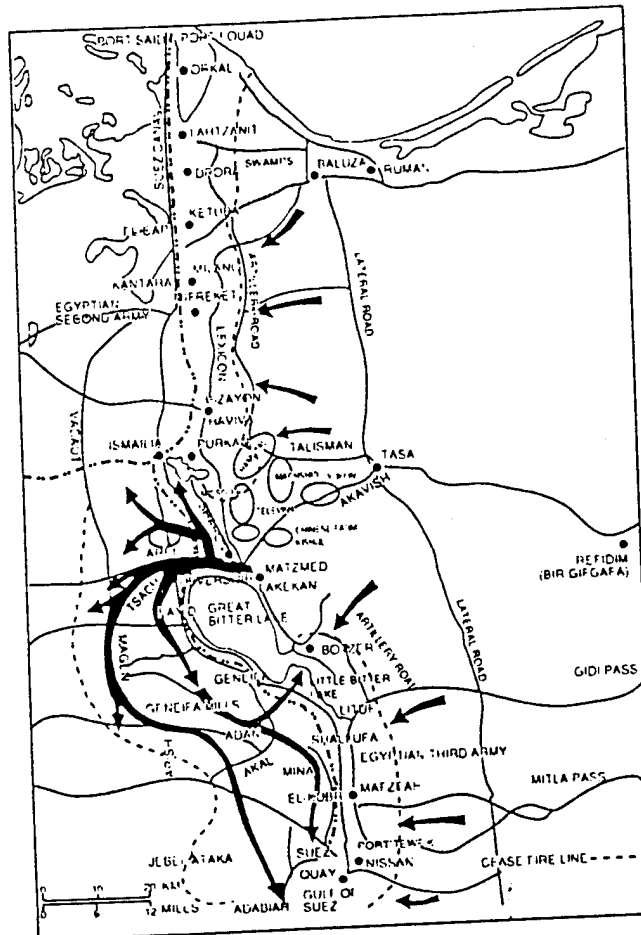


FIGURE #3

DOUBLE ENVELOPMENT

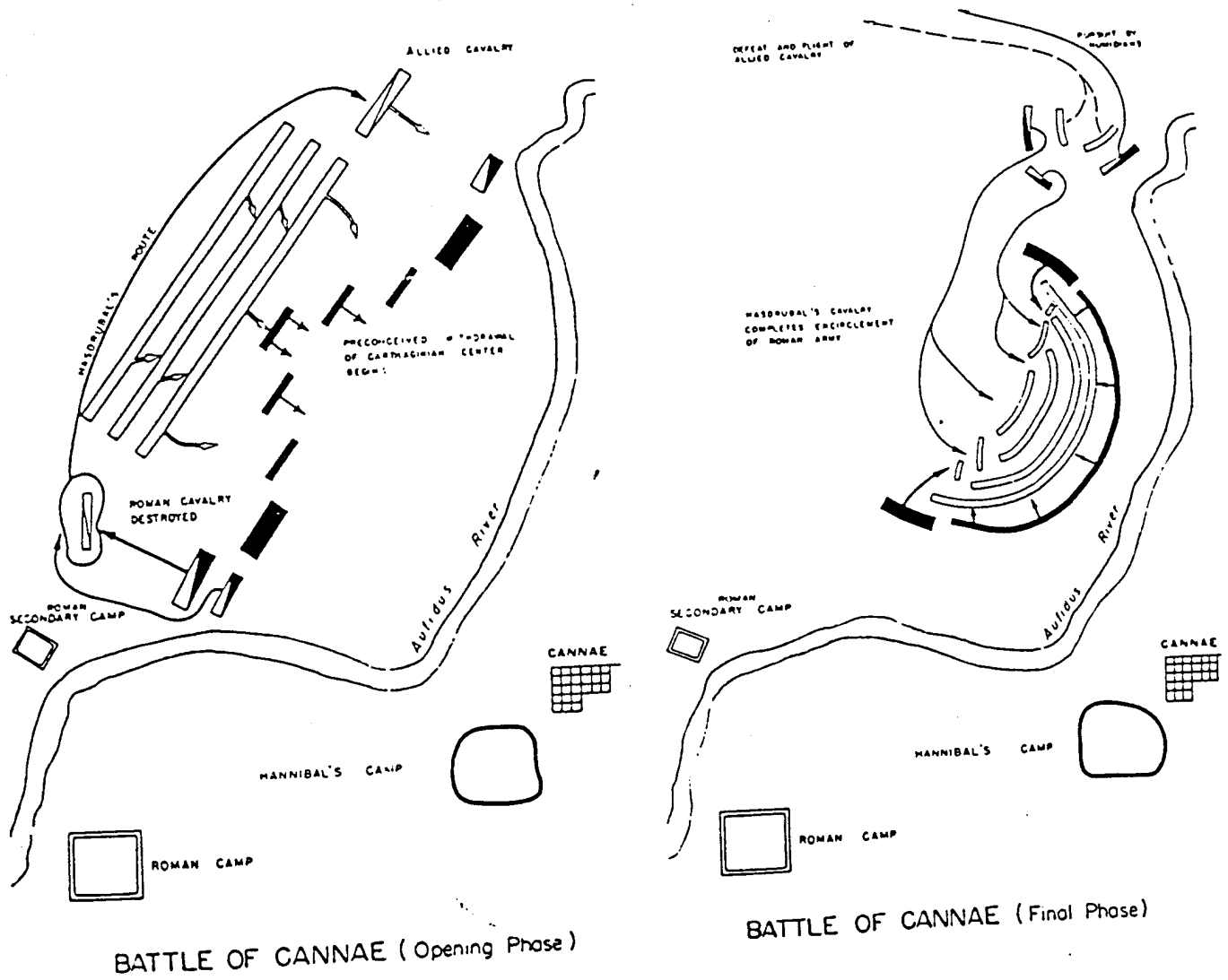


FIGURE #4

ENCIRCLEMENT WITH INNER AND OUTER ARMS

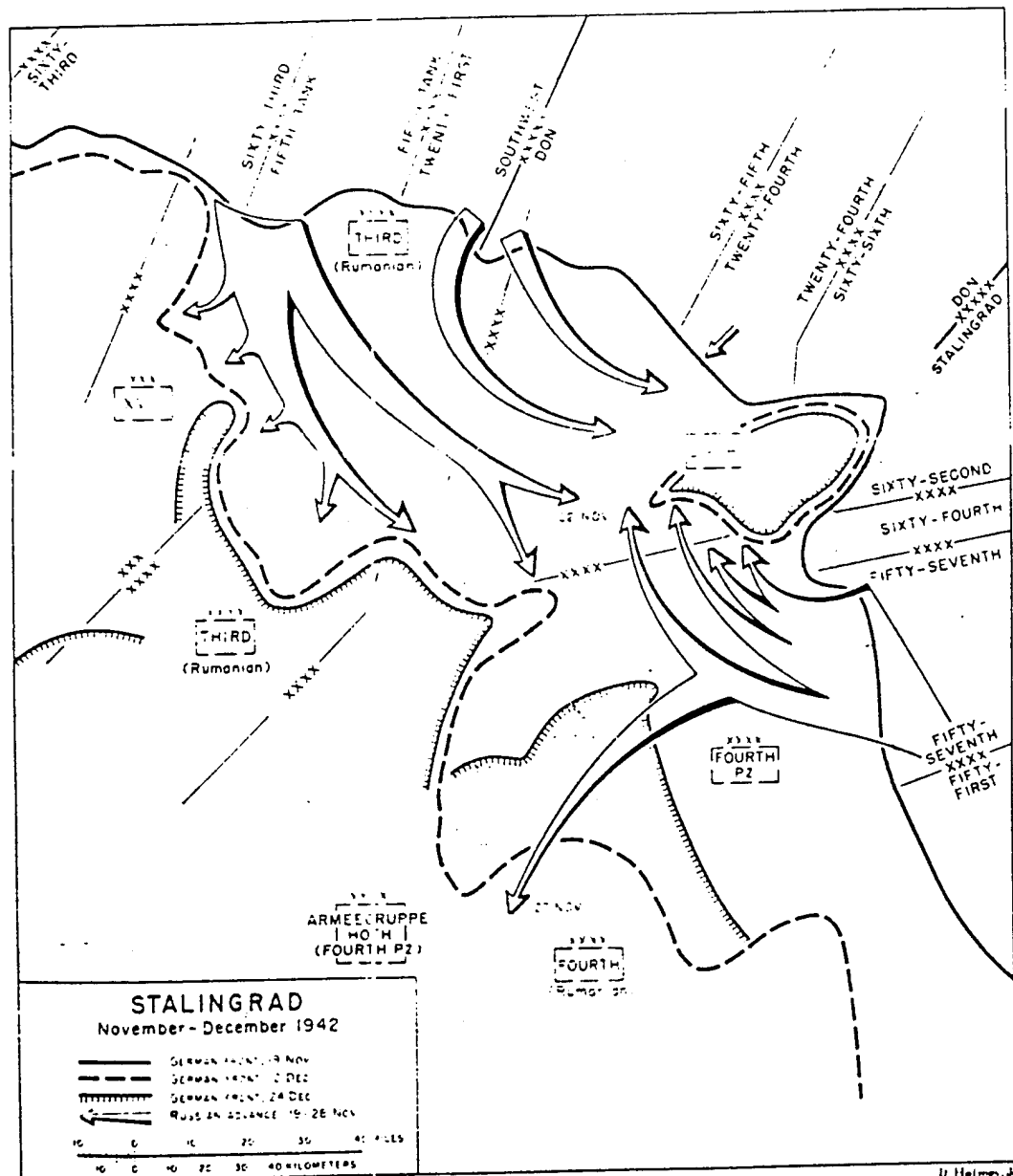
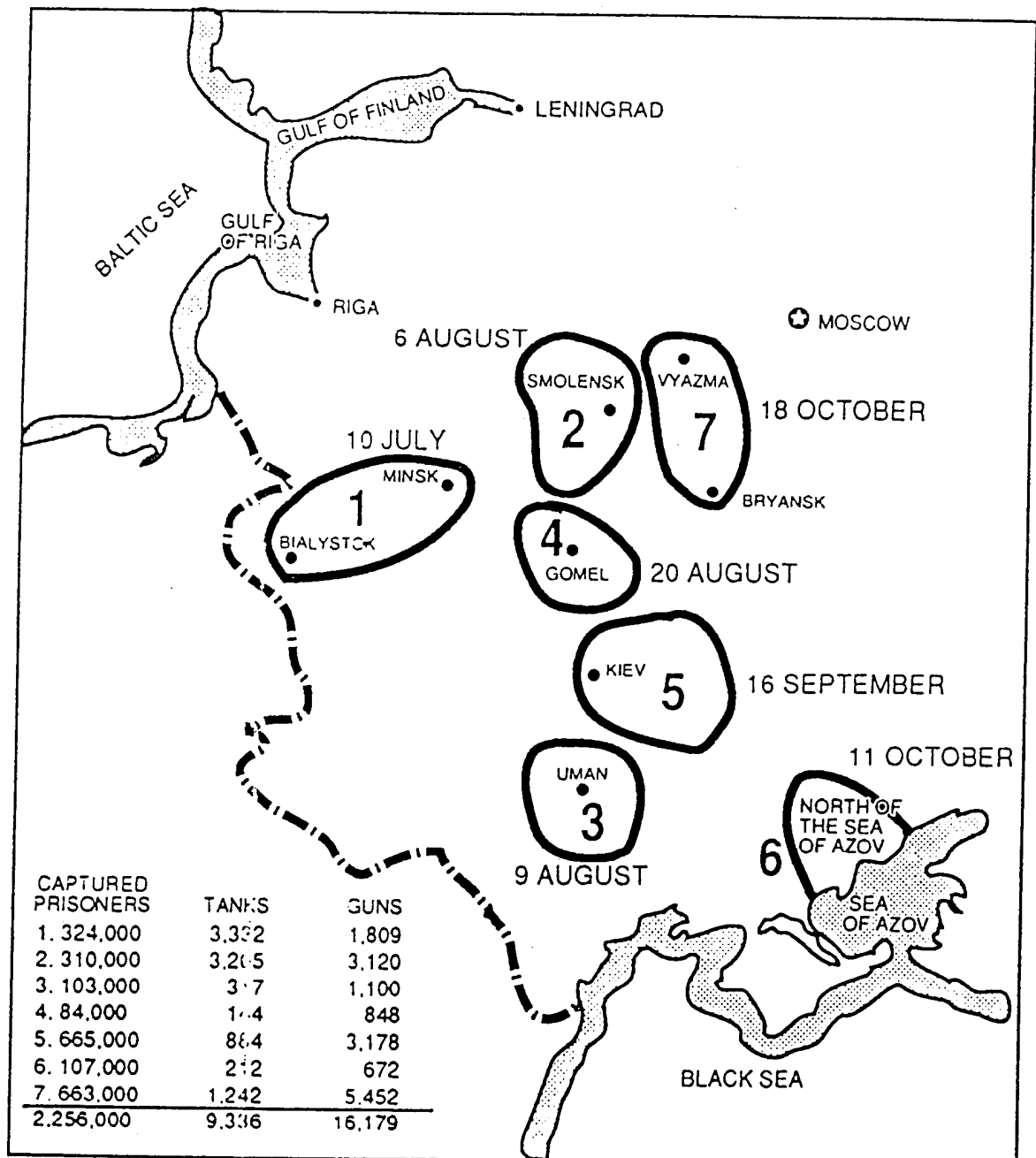


FIGURE #5

OPERATION BARBAROSSA - 1941



ACRONYMS

<u>ACRONYM</u>	<u>LONG TITLE</u>
JFC	Joint Force Commander
NATO	North Atlantic Treaty Organization
OMG	Operations Maneuver Group
SAM	Surface to Air Missile
US	United States
WMD	Weapons of Mass Destruction

BIBLIOGRAPHY

BOOKS

- Angell, Robert C. The Quest for World Order. Ann Arbor, MI: The University of Michigan Press, 1979.
- Bernhardi, Frederick von. Cavalry in Future Wars. London, Eng: John Murray, 1909.
- _____. On War of Today. Volume I. London, Eng: Hugh Rees, Ltd., 1912.
- _____. On War of Today. Volume II. London, Eng: Hugh Rees, Ltd., 1913.
- Chambers, James. The Devil's Horsemen: The Mongol Invasion of Europe. London, Eng: Morrison and Gibb Ltd., 1979.
- Clausewitz, Carl von. On War. Princeton, NJ: Princeton University Press, 1989.
- Cleary, Thomas, ed. Mastering the Art of War. Boston, MA: Shambhala Publications Inc., 1989.
- Dunnigan, James F. and Austin Bay. A Quick and Dirty Guide to War: Briefings on Present and Potential Wars. New York: William Morrow and Company, 1991.
- Dupuy, R. Ernest and Trevor N. Dupuy. The Harper Encyclopedia of Military History. 4th Edition. New York: Harper Collins Publishers, 1993.
- Fuller, J. F. C. The Conduct of War, 1789 - 1961. New Brunswick, NJ: Rutgers University Press, 1961; reprint ed., New York: Da Capo Press, 1992.
- Goltz, Colmar Freiherr von der. The Conduct of War. London, Eng: Kegan Paul, Trench, Trubner and Co., Ltd., 1917.
- Hart, B. H. Liddell. Strategy. 2nd revised ed. New York: Meridan Book, 1991.
- Handel, Michael I. Masters of War: Sun Tzu, Clausewitz and Jomini. Portland, OR: Frank Cass, 1992.
- Irving, David. The Trail of the Fox. New York: Avon Books, 1978.
- Lamb, Harold. The March of the Barbarians. Garden City, NY: Country Life Press, 1940.
- Lind, William S. Maneuver Warfare Handbook. Boulder, CO: Westview Press, 1985.

BIBLIOGRAPHY

- Marshall, Robert. Storm from the East: From Genghis Khan to Khubilai Khan. Berkeley, CA: University of California Press, 1993.
- Marshall, S. L. A. Men Against Fire: The Problem of Battle Command in Future War. Glouster, MA: Peter Smith, 1978.
- O'Sullivan, Patrick and Jesse W. Miller, Jr. The Geography of Warfare. New York: St. Martin's Press, 1983.
- Patton, George S. War as I Knew It. New York: Bantam Books, 1980.
- Peltier, Louis C. and G. Etzel Percy. Military Geography. New York: D. Van Nostrad Company, Inc., 1966.
- Phillips, E. D. The Mongols. New York: Frederick A. Praeger, Inc., 1969.
- Prawdin, Michael. The Mongol Empire: Its Rise and Legacy. 3rd Edition. London, Eng: Bradford and Dickens, 1953.
- Ronay, Gabriel. The Tartar Khan's Englishman. London, Eng: Cassell Ltd., 1978.
- Saunders, J. J. The History of the Mongol Conquests. New York: Barnes and Noble, 1971.
- Summers, Harry G. On Strategy II: A Critical Analysis of the Gulf War. New York: Dell Publishing, 1992.
- Toffler, Alvin and Heidi Toffler. War and Anti-War. New York: Warner Books, 1993.
- Tzu, Sun. The Art of War. London, Eng: Oxford University Press, 1971.

PERIODICALS

- Ajami, Fouad. The Summoning. Foreign Affairs, Sep/Oct 1993, pp. 2-9.
- Bacevich, A. J. Preserving the Well-Bred Horse. The National Interest, Fall 1994, pp. 43-49.
- Bartley, Robert L. The Case for Optimism: The West Should Believe in Itself. Foreign Affairs, Sep/Oct 1993, pp. 15-18.
- Franks, Frederick M. Full-Dimensional Operations: A Doctrine for an Era of Change. Military Review, December, 1993, pp. 5-10.

BIBLIOGRAPHY

- Horner, Charles A. Space Systems Pivotal to Modern Warfare. Defense 94, Issue 4, pp. 20-29.
- Huntington, Samuel P. The Clash of Civilizations? Foreign Affairs, Summer 1993, pp. 22-49.
- Kaplan, Robert D. The Coming Anarchy. The Atlantic Monthly, Feb 1994, pp. 44-76,
- Krause, Michael D. "Getting to Know Jomini." Joint Force Quarterly, Spring, 1995, pp. 126-128.
- Krepinevich, Andrew F. Cavalry to Computer: The Pattern of Military Revolutions. The National Interest, Fall 1994, pp. 30-42.
- Mahbubani, Kishore. The Dangers of Decadence: What the Rest can Teach the West. Foreign Affairs, Sep/Oct 1993, pp. 10-14.
- Moorman, Thomas. The "Space" Component of "Aerospace". Comparative Strategy, Vol. 12, Jul-Sep 1993, pp. 251-255.
- Paparone, Christopher. "Case for a Unified Logistics." Army Logistician, March/April, 1995, pp. 2-6.
- Pudas, Terry J. Preparing Future Coalition Commanders. Joint Force Quarterly, Winter 1993-4, pp. 40-46.
- Winton, Harold R. Reflections on the Air Force's New Manual. Military Review, November, 1992, pp. 20-31.
- Wolf, James R. Implications of Space-Based Observation. Military Review, April, 1994, pp. 75-85.
- Zinni, Anthony. It's Not Nice and Neat. Proceedings, August 1995, pp. 26-30.

U. S. MILITARY PUBLICATIONS

- Alderman, Marc I. Quick Decisive Victory: The Search for the Holy Grail. Fort Leavenworth, KS: USA Command and General Staff College, 1993.
- Armed Forces Staff College. Service Warfighting Philosophy and Synchronization of Joint Forces. AFSC Pub 2. Norfolk, VA: 1992.
- Fix, Robert G. Operational Encirclement: Quick Decisive Victory or a Bridge Too Far? Fort Leavenworth, KS: USA Command and General Staff College, 1993.

BIBLIOGRAPHY

- Gabel, Christopher R. The 4th Armored Division in the Encirclement of Nancy. Fort Leavenworth, KS: USA Command and General Staff College, 1986.
- Grau, Lester W. Fighting within an Encirclement: A Comparison of National Concepts. Fort Leavenworth, KS: Soviet Army Studies Office, USA Combined Arms Command, 1991.
- Greenfield, Kent R., ed. Command Decisions. Washington: Center of Military History, 1990.
- Gutwald, Rick. The Effects of Operational Encirclements. Fort Leavenworth, KS: USA Command and General Staff College, 1987.
- Nauta, Frans. Logistics Implications of Maneuver Warfare. Volume 2. Bethesda, MD: Logistics Management Institute, 1988.
- _____. Logistics Implications of Maneuver Warfare. Volume 3. Bethesda, MD: Logistics Management Institute, 1988.
- _____. Logistics Implications of Maneuver Warfare. Volume 5. Bethesda, MD: Logistics Management Institute, 1989.
- Peppers, John M. Quick Decisive Victory - Wisdom or Mirage? Fort Leavenworth, KS: USA Command and General Staff College, 1993.
- Ross, Steven T. Napoleon and Maneuver Warfare. Colorado Springs, CO: USAF Academy, 1985.
- Rudelsheim, Frederick S. Quick, Decisive Victory: Defining Maxim or Illusory Concept Within Army Doctrine? Fort Leavenworth, KS: USA Command and General Staff College, 1993.
- Turner, Frederick C. Comments on FM 100-5 from a Soviet Point of View. Carlisle Barracks, PA: USA War College, 1978.
- U. S. Army. Decisive Force: The Army in Theater Operations. FM 100-7. Washington, 1995.
- _____. Decisive Victory, America's Power Projection Army. A White Paper. Washington, 1994.
- _____. Infantry, Airborne, and Air Assault Division Operations. FM 71-100. Washington, 1980.
- _____. Light Infantry Division Operations. FC 71-101. Fort Leavenworth, KS: USA Command and General Staff College, 1984.

BIBLIOGRAPHY

- _____. Military Operations in Urbanized Terrain (MOUT). FM 90-10. Washington, 1979.
- _____. Operations. FM 100-5. Washington, 1993.
- U. S. Joint Staff. Department of Defense Dictionary of Military and Associated Terms. JCS Pub 1-02. Washington, 1989.
- _____. Doctrine for Joint Operations. Jt Pub 3-0. Washington, 1995.
- _____. Doctrine for Logistics Support of Joint Operations. Jt Pub 4-0. Washington, 1995.
- _____. Doctrine for Planning Joint Operations. Jt Pub 5-0. Washington, 1995.
- _____. Joint Doctrine for Amphibious Operations. Jt Pub 3-02. Washington, 1992.
- _____. Joint Warfare of the Armed Forces of the United States. Jt Pub 1. Washington, 1995.
- _____. Unified Action Armed Forces (UNAAF). Jt Pub 0-2. Washington, 1995.
- U. S. Marine Corps. Campaigning. FMFM 1-1. Washington, 1990.
- _____. Ground Combat Operations. OH 6-1. Quantico, VA: Marine Corps Combat Development Command, 1988.
- _____. Marine Division. FMFM 6-1. Washington, 1995.
- _____. Military Operations in Urban Terrain. FMFM 7-15 (Coordinating Draft). Quantico, VA: Marine Corps Combat Development Command, 1993.
- _____. Warfighting. FMFM 1. Washington, 1989.
- Van Creveld, Martin. Air Power and Maneuver Warfare. Maxwell AFB, AL: Air University Press, 1994.
- Vanderbeek, Walter A. The Decisive Point: The Key to Victory. Alexandria, VA: Defense Technical Information Center, 1994.
- Willoughby, Charles A. Maneuver in War. NAVMC 2796. Washington: Headquarters, U. S. Marine Corps, 1986.
- Ziemke, Earl F. Stalingrad to Berlin: The German Defeat in the East. Washington: United States Army, 1968.